

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-4 (Canceled)

5. (Currently Amended) A homopolymer which is obtained by polymerization of a polymerizable polyoxyalkylene monoalkyl ether derivative represented by formula [3] described in Claim 4



wherein R¹ represents a hydrocarbon group having 1 to 18 carbon atoms, R³ represents acryloyl group or methacryloyl group, AO represents an oxyalkylene group having 2 to 4 carbon atoms, n represents an average number of addition of the oxyalkylene group which is 5 to 500, a plurality of AO may represent the same type of oxyalkylene group or different types of oxyalkylene groups and, when the plurality of AO represent different types of oxyalkylene groups, the different types of oxyalkylene groups may be arranged randomly or in blocks, and has a molecular weight of 1,000 to 300,000, said polyoxyalkylene monoalkyl ether derivative being obtained by using a polyoxyalkylene monoalkyl ether represented by formula [1]:



wherein R¹ and AO and n are as defined above,

wherein a chromatogram of the polyoxyalkylene monoalkyl ether obtained in accordance

with gel permeation chromatography which exhibits a relation between an intensity of a refractive index obtained by a differential refractometer and an elution time satisfies a relation expressed by equation (A):

$$\underline{S_1/S_0 \leq 0.15} \quad \dots(A)$$

wherein S_1 represents an area under a portion of the chromatogram from start of elution to an earliest elution time when the intensity of a refractive index has a value of $L/3$, L representing a shortest distance between a greatest maximum point of the intensity of a refractive index and a base line, and S_0 represents an area under a portion of the chromatogram from start of elution time when the intensity of a refractive index has the greatest maximum value.

6. (Currently Amended) A copolymer which is obtained by copolymerization of:
5 to 95% by mol of a polymerizable polyoxyalkylene monoalkyl ether derivative represented by formula [2] described in Claim 3



wherein R^1 represents a hydrocarbon group having 1 to 18 carbon atoms, R^2 represents an unsaturated hydrocarbon group having 2 to 4 carbon atoms, AO represents an oxyalkylene group having 2 to 4 carbon atoms, n represents an average number of addition of the oxyalkylene group which is 5 to 500, a plurality of AO may represent the same type of oxyalkylene group or different types of oxyalkylene groups and, when the plurality of AO represent different types of oxyalkylene groups, the different types of oxyalkylene groups may be arranged randomly or in blocks, and

95 to 5% by mol of a monomer copolymerizable with the polymerizable polyoxyalkylene

monoalkyl ether derivative and has,

said copolymer having a molecular weight of 500 to 100,000, said polyoxyalkylene monoalkyl ether derivative being obtained by using a polyoxyalkylene monoalkyl ether represented by formula [1]:



wherein R¹ and AO and n are as defined above,

wherein a chromatogram of the polyoxyalkylene monoalkyl ether obtained in accordance with gel permeation chromatography which exhibits a relation between an intensity of a refractive index obtained by a differential refractometer and an elution time satisfies a relation expressed by equation (A):

$$\frac{S_1}{S_0} \leq 0.15 \quad \dots(\text{A})$$

wherein S₁ represents an area under a portion of the chromatogram from start of elution to an earliest elution time when the intensity of a refractive index has a value of L/3, L representing a shortest distance between a greatest maximum point of the intensity of a refractive index and a base line, and S₀ represents an area under a portion of the chromatogram from start of elution time when the intensity of a refractive index has the greatest maximum value.

7. (Original) A copolymer according to Claim 6, wherein R² in formula [2] representing the polymerizable polyoxyalkylene monoalkyl ether derivative represents an unsaturated hydrocarbon group having 3 to 4 carbon atoms and the monomer copolymerizable with the polymerizable polyoxyalkylene monoalkyl ether derivative is an unsaturated carboxylic acid.

8. (Currently Amended) A copolymer which is obtained by copolymerization of:
 5 to 95% by mol of a polymerizable polyoxyalkylene monoalkyl ether derivative represented
 by formula [3] described in Claim 4



wherein R¹ represents a hydrocarbon group having 1 to 18 carbon atoms, R³ represents acryloyl group or methacryloyl group, AO represents an oxyalkylene group having 2 to 4 carbon atoms, n represents an average number of addition of the oxyalkylene group which is 5 to 500, a plurality of AO may represent the same type of oxyalkylene group or different types of oxyalkylene groups and, when the plurality of AO represent different types of oxyalkylene groups, the different types of oxyalkylene groups may be arranged randomly or in blocks, and

95 to 5% by mol of a monomer copolymerizable with the polymerizable polyoxyalkylene monoalkyl ether derivative and has,

said copolymer having a molecular weight of 500 to 100,000, said polyoxyalkylene monoalkyl ether derivative being obtained by using a polyoxyalkylene monoalkyl ether represented by formula [1]:



wherein R¹, AO and n are defined above,

wherein a chromatogram of the polyoxyalkylene monoalkyl ether obtained in accordance with gel permeation chromatography which exhibits a relation between an intensity of a refractive index obtained by a differential refractometer and an elution time satisfies a relation expressed by equation (A):

$S_1/S_0 \leq 0.15$... (A)

wherein S_1 represents an area under a portion of the chromatogram from start of elution to an earliest elution time when the intensity of a refractive index has a value of $L/3$, L representing a shortest distance between a greatest maximum point of the intensity of a refractive index and a base line, and S_0 represents an area under a portion of the chromatogram from start of elution time when the intensity of a refractive index has the greatest maximum value.

9. (Original) A copolymer according to Claim 8, wherein the monomer copolymerizable with the polymerizable polyoxyalkylene monoalkyl ether derivative represented by formula [3] is an unsaturated carboxylic acid.

10. (Original) A dispersant comprising a copolymer described in Claim 6.

11. (Original) A dispersant comprising a copolymer described in Claim 7.

12. (Original) A dispersant comprising a copolymer described in Claim 8.

13. (Original) A dispersant comprising a copolymer described in Claim 9.

14. (New) A copolymer according to Claim 7, wherein the unsaturated carboxylic acid is at least one acid selected from the group consisting of acrylic acid, methacrylic acid, maleic acid and maleic anhydride.

15. (New) A copolymer according to Claim 9, wherein the unsaturated carboxylic acid is at least one acid selected from the group consisting of acrylic acid, methacrylic acid, maleic acid and maleic anhydride.